

**SOLID WASTE MANAGEMENT PLAN
NAVAL STATION NEWPORT
CONTRACT N62472-00-D-6941
PROJECT C
WORK REQUEST NO. 40-208-01**

Prepared for

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EXECUTIVE SUMMARY

A Solid Waste Management Plan (SWMP) has been developed for Naval Station Newport (NAVSTA Newport) by Nobis Engineering, Inc. The SWMP is required by Chapter 14 of OPNAVINST 5090.1B Change 3 and is designed to meet the requirements specified therein as well as to address issues specific to NAVSTA Newport. Currently, NAVSTA Newport is recycling approximately 28.42% of the solid waste generated. This percentage is within the average national percentage, but below the NAVSTA Newport goal of 35% for diversion of solid waste for commercial and family housing. However, NAVSTA Newport has already met the Measure of Merit (MOM) goal of diverting 40% of all generated solid waste by the end of fiscal year 2005, which includes all materials disposed and recycled by contractors performing work on NAVSTA Newport. This SWMP provides recommendations in order to further increase the percent of solid waste diverted.

NAVSTA Newport consists of 10 departments as well as 37 Tenant Commands. The operations and activities that take place on the base can be broadly defined as education, administrative, medical services, food services, public works and commercial operations, and the provision of housing for military personnel and their families. Each of these operations/activities generates specific waste streams, with the largest being mixed trash, mixed paper, cardboard, medical waste, and various recyclable materials.

The recycling of materials is performed under a Qualified Recycling Plan (QRP). NAVSTA Newport's specific QRP establishes a recycling program that allows NAVSTA Newport to receive 100% of the proceeds from recyclable materials (cardboard and mixed paper) sales. The rebate monies are placed in the designated **F3875 holding account and the money is used to pay for the recycling program first with any remaining monies being used for Morale, Welfare, and Recreation (MWR) type activities. The roles and responsibilities of all parties involved in the QRP are clearly outlined within this plan.

The existing solid waste collection and disposal contract is divided into two sections, one for the family housing areas and one for the remaining areas of NAVSTA Newport. One contractor provides the collection and disposal for both family housing and NAVSTA commercial mixed trash and recyclables. The contractor picks up mixed trash and recyclable materials, including glass, tin cans, plastics, newspapers, cardboard, mixed paper, aluminum foil/cans, and wood. Other recyclable materials including scrap metal, aluminum cans, batteries, and compact discs are brought to the Recycling Center at Building 47CC by designated recycling coordinators. Compost materials such as brush, tree branches, garden waste, etc., will be collected at Building 47CC under the 2003 solid waste/recycling contract upon award. Once recyclables are collected at Building 47CC, Recycling Center personnel coordinate the sale of these materials. Biomedical waste, compostable materials, and toner cartridges are also recycled through different contracts.

A dumpster survey was performed to determine what percent of recyclable materials are currently being disposed as mixed trash. Cardboard and mixed paper remain the largest commodities being disposed as mixed trash instead of being recycled. This SWMP makes recommendations for further reduction of solid waste disposed as mixed trash through source reduction. A Dumpster

Location Plan has been included which incorporates the requirement for all dumpsters and recyclable containers to be placed a minimum of 75 feet from existing buildings.

Additional training and awareness programs outlined in this plan will help ensure that NAVSTA Newport reach it's goal of recycling 35% of all solid waste.

TABLE OF CONTENTS

| | | |
|------------|---|-----------|
| 1.0 | INTRODUCTION..... | 1 |
| 1.1 | PROJECT OVERVIEW..... | 1 |
| 1.2 | DEFINITIONS..... | 1 |
| 1.3 | RELEVANT LAWS, REGULATIONS, AND GUIDELINES | 5 |
| 1.3.1 | <i>Navy Guidelines.....</i> | 5 |
| 1.3.2 | <i>Federal Regulations.....</i> | 6 |
| 1.3.3 | <i>State Regulations</i> | 9 |
| 1.3.4 | <i>Local Regulations</i> | 10 |
| 1.4 | ORGANIZATIONAL CHART..... | 11 |
| 1.5 | PROJECT GOALS | 12 |
| 1.6 | INSTALLATION DESCRIPTION..... | 12 |
| 1.6.1 | <i>NAVSTA Newport.....</i> | 13 |
| 1.6.2 | <i>Housing.....</i> | 15 |
| 1.6.3 | <i>Armed Forces Reserve Center, Providence, RI</i> | 16 |
| 2.0 | EXISTING SOLID WASTE COLLECTION AND DISPOSAL..... | 16 |
| 2.1 | HOUSING | 16 |
| 2.2 | NAVSTA NEWPORT COMPLEX..... | 17 |
| 2.3 | ARMED FORCES RESERVE CENTER, PROVIDENCE, RI..... | 17 |
| 2.4 | PROPOSED DUMPSTER LOCATION PLAN (DLP) | 17 |
| 2.5 | DUMPSTER SURVEY | 18 |
| 2.6 | OTHER SOLID WASTES | 19 |
| 2.6.1 | <i>Biomedical Waste.....</i> | 19 |
| 2.6.2 | <i>Bulky Waste.....</i> | 19 |
| 2.6.3 | <i>Compostable Materials.....</i> | 19 |
| 2.7 | ROLES AND RESPONSIBILITIES..... | 20 |
| 3.0 | EXISTING RECYCLING..... | 20 |
| 3.1 | QUALIFIED RECYCLING PROGRAM | 20 |
| 3.1.1 | <i>Rebate Program.....</i> | 21 |
| 3.2 | NAVSTA NEWPORT RECYCLING PROCEDURES..... | 21 |
| 3.2.1 | <i>General</i> | 21 |
| 3.2.2 | <i>Sorting.....</i> | 22 |
| 3.2.3 | <i>Commodities</i> | 22 |
| 3.3 | ROLES AND RESPONSIBILITIES..... | 23 |
| 3.3.1 | <i>Commanding Officer.....</i> | 23 |
| 3.3.2 | <i>Commanding Officer/Officers in Charge.....</i> | 23 |
| 3.3.3 | <i>Qualified Recycling Board.....</i> | 23 |
| 3.3.4 | <i>Public Affairs Office</i> | 23 |
| 3.3.5 | <i>Public Works Department.....</i> | 24 |
| 3.3.6 | <i>ROICC and Facilities Support Contracts</i> | 24 |
| 3.3.7 | <i>Comptroller.....</i> | 24 |
| 3.3.8 | <i>Supply Operations.....</i> | 25 |
| 3.3.9 | <i>Fire Department.....</i> | 25 |
| 3.3.10 | <i>Housing Division</i> | 25 |
| 3.3.11 | <i>NAVSTA Newport MWR Department</i> | 25 |
| 3.3.12 | <i>NAVSTA Newport Environmental Supervisor/Engineer</i> | 25 |
| 3.3.13 | <i>NAVSTA Newport Safety Department.....</i> | 26 |
| 3.3.14 | <i>Recycling Coordinators</i> | 26 |
| 3.3.15 | <i>Individuals Working at NAVSTA Newport.....</i> | 26 |
| 3.4 | HOUSING RECYCLING..... | 26 |

| | | |
|------------|---|-----------|
| 3.5 | NAVSTA NEWPORT COMMERCIAL RECYCLING | 27 |
| 3.5.1 | <i>Scrap Metal</i> | 29 |
| 3.5.2 | <i>Aluminum Cans</i> | 29 |
| 3.5.3 | <i>Toner Cartridges</i> | 29 |
| 3.6 | ARMED FORCES RESERVE CENTER, PROVIDENCE, RI | 30 |
| 3.7 | CONTRACTOR GENERATED SOLID WASTE | 30 |
| 3.8 | EVALUATION OF GOALS | 30 |
| 4.0 | WASTE CHARACTERIZATION | 31 |
| 4.1 | ASSESSMENT OF PROPOSED SOLID WASTE DISPOSAL AND RECYCLING CONTAINER LOCATIONS | 31 |
| 4.2 | POPULATION | 32 |
| 4.2.1 | <i>Full-Time Residents</i> | 32 |
| 4.2.2 | <i>Non-Residents</i> | 33 |
| 4.3 | GENERATION RATES | 344 |
| 5.0 | FUTURE CONDITIONS AND AREAS FOR ADDITIONAL SOLID WASTE REDUCTION | 34 |
| 5.1 | POPULATION PROJECTIONS | 34 |
| 5.2 | GENERATION PROJECTIONS | 34 |
| 5.3 | RECYCLING | 35 |
| 5.3.1 | <i>Potential Additional Recycling</i> | 35 |
| 5.3.2 | <i>Employee Training</i> | 35 |
| 5.4 | SOURCE REDUCTION | 36 |
| 5.4.1 | <i>Waste Paper Reduction</i> | 36 |
| 5.4.2 | <i>Waste Cardboard Reduction</i> | 37 |
| 5.5 | WASTE STREAM TRACKING | 37 |
| 5.6 | EDUCATION AND AWARENESS | 37 |
| 5.6.1 | <i>NAVALOG</i> | 37 |
| 5.6.2 | <i>Naval Cable TV Channels</i> | 38 |
| 5.6.3 | <i>Plan Of The Day</i> | 38 |
| 5.6.4 | <i>Information Resources Management Department</i> | 38 |
| 5.7 | MATERIAL PROCUREMENT | 38 |
| 6.0 | RECOMMENDATIONS | 40 |
| 6.1 | COLLECTION | 40 |
| 6.2 | RECYCLING | 41 |
| 6.3 | DISPOSAL | 41 |
| 6.4 | SOURCE REDUCTION | 42 |
| 6.5 | WASTE STREAM TRACKING | 42 |
| 6.6 | EDUCATION AND AWARENESS | 43 |
| 6.7 | MATERIAL PROCUREMENT | 43 |
| 7.0 | REFERENCES | 45 |

TABLES

| | | |
|---------|--|----|
| Table 1 | Rhode Island Mandatory Recyclables for Non-Municipal Residential and Commercial Properties | 9 |
| Table 2 | Family Housing Recyclable Materials and Solid Waste Generation | 27 |
| Table 3 | Base Commercial Recyclable Quantities | 28 |
| Table 4 | Commercial Recyclable Materials and Solid Waste Generation | 29 |
| Table 5 | Contractor Mixed Trash and Recyclable Quantities | 30 |
| Table 6 | Diversion Rates Compared to Goals | 31 |
| Table 7 | NAVSTA Newport Full Time Residents 2002 | 33 |

| | | |
|----------|---|----|
| Table 8 | NAVSTA Newport Non-Residents 2002 | 33 |
| Table 9 | Municipal Solid Waste Generation | 34 |
| Table 10 | Percentage of Solid Waste Diverted Through Recycling..... | 35 |
| Table 11 | Waste Paper Reduction Techniques | 36 |
| Table 12 | Waste Cardboard Reduction Practices | 37 |

FIGURES

Figure 1 Project Location Map

APPENDICES

Appendix A Dumpster Location Plan
Appendix B January 2003 Dumpster Survey Data
Appendix C Summaries of NAVSTA Newport Solid Waste Weights
Appendix D Calculations

1.0 INTRODUCTION

1.1 Project Overview

This Solid Waste Management Plan (SWMP) has been developed by Nobis Engineering, Inc. (*Nobis*) by updating the October 2000 SWMP for Naval Station Newport (NAVSTA Newport) at Newport, Rhode Island. Chapter 14 of OPNAVINST 5090.1B Change 3, Environmental and Natural Resources Program Manual, Department of the Navy, (current edition), requires that all Navy activities develop and implement a SWMP. This plan is designed to meet the requirements of OPNAVINST 5090.1B Change 3 as well as to address concerns and issues specific to NAVSTA Newport as expressed by NAVSTA Newport environmental personnel, revealed during preparation of this plan. The significant elements of this SWMP are as follows:

- Regulatory framework
- Waste characterization
- Existing collection and disposal
- Dumpster Location Plan
- Recycling programs
- Source reduction
- Education and information dissemination
- Future trends and needs

NAVSTA Newport recycled 28.42% of the solid waste generated in 2002. This percentage of diverted material is approximately 6.2% greater than the diversion rate in 1998. NAVSTA Newport is currently within the national average of 25-35%, but is below the current NAVSTA Newport goal of 35% diversion for commercial and family housing solid waste. NAVSTA Newport has met the Department of Defense Measure of Merit (MOM) goal of 40% diversion by fiscal year 2005, which includes the diversion of materials not only from commercial and family housing solid waste, but also solid waste generated by contractors performing work on the base. This SWMP explains the current method of solid waste, recyclable material collection, and disposal and seeks to provide recommendations to allow for additional diversion of materials to help meet the NAVSTA Newport and the MOM goal.

NAVSTA Newport is made up of several geographic and administrative entities. Figure 1 is a project location map that shows the various geographic areas that comprise NAVSTA Newport and are included in the SWMP and their locations within the state of Rhode Island. Currently, approximately 37 tenant commands operate at NAVSTA Newport.

1.2 Definitions

The following definitions are for terminology utilized within this plan.

AFFIRMATIVE PROCUREMENT: The policy and practice of purchasing products made with recycled materials instead of buying competing products that do not contain recycle materials.

BULKY WASTE: Large items (furniture, auto parts, construction debris, trees, etc.) which cannot be handled by routine municipal solid waste handling procedures. See also White Goods.

COLLECTION: The act of removing accumulated containerized solid waste from the generating source.

COMMERCIAL WASTE: Waste material which originates in wholesale, retail or service establishments such as office buildings, stores, markets, theaters, hotels and warehouses.

COMPACTOR, (WASTE): A machine that reduces the volume of solid waste by forcing and compressing it into a container.

COMPOST: As a noun, the humus-like organic product generated from composting. As a verb, to decay, or decompose.

COMPOSTING: A microbial degradation of organic wastes yielding a nuisance-free product of potential value as a soil conditioner.

COMPREHENSIVE PROCUREMENT GUIDELINES: An EPA designated list of items within eight product categories, including Paper and Paper Products, Vehicular Products, Construction Products, Transportation Products, Park and Recreation Products, Landscaping Products, Nonpaper Office Products, and Miscellaneous Products, that when purchased by certain federal, state, and local government procuring agencies, must contain specified recovered (recycled) material percentages. The CPG seeks to encourage recycling through providing a market for items containing recovered materials content.

CONSTRUCTION AND DEMOLITION WASTES: Waste building materials and rubble resulting from construction, remodeling, repair and demolition operations on houses, commercial buildings, pavements and other structures.

CONTAINER: A nonspecific term for a receptacle capable of closure.

LIFT AND CARRY - a large container that can be lifted onto a service vehicle and transported to a disposal site for emptying; also called a detachable container or drop-off box.

ROLL-ON/ROLL-OFF - a large container (20 to 40 cubic yards) that can be pulled onto a service vehicle mechanically and carried to a disposal site for emptying.

CURBSIDE COLLECTIONS: Programs where recyclable materials are collected at the curb, often from special containers to be brought to various processing facilities.

FERROUS: Pertaining to or derived from iron.

FOOD WASTE: Animal and vegetable waste resulting from the handling, storage, sale, preparation, cooking, and serving of foods; commonly called garbage.

INCINERATOR: An engineered apparatus used to burn waste substances and in which all factors of combustion: temperature, retention time, turbulence, and combustion air, can be controlled.

MIXED RECYCLABLES: Recyclable materials including plastic, glass, tin cans, and aluminum (cans, foil, etc.) that are not separated into individual components for recycling pick-up.

MIXED TRASH: See Municipal solid waste.

MULCH: Material such as straw, hay or leaves that is placed on the earth to protect soil and seed from the effects of weather.

MUNICIPAL SOLID WASTE: Essentially residential, commercial, and non-process industrial solid waste. Other components might be street sweepings, catchment basin wastes, institutional/office (hospitals, health care facilities, veterinary offices, government office facilities) wastes, solid wastes from recreational activities, lawn care wastes, etc. Normally, construction wastes, demolition wastes, agricultural wastes, mining wastes, abandoned automobiles, ashes, and sewage sludge are not a part of municipal solid waste. See Solid Waste.

NEWSPRINT: A generic term used to describe paper of the type generally used in the publication of newspapers.

NONFERROUS METAL: Metals that contain no iron, such as aluminum, copper, brass, and bronze.

OFFICE WASTE: Office waste means solid wastes generated in the buildings, rooms, or series of rooms in which the affairs of a branch of the government are carried on. Excludes waste generated in cafeterias, snack bars, or other food preparation and sales activities.

ORGANIC: Materials containing carbon which oxidize or burn easily, contain nitrogen or sulfur or both and usually give off odorous by-products.

QUALIFIED RECYCLING PROGRAM (QRP): QRP's are organized operations that require concerted efforts to divert or recover scrap or waste from the waste streams, as well as efforts to identify, segregate, and maintain the integrity of the recyclable materials in order to maintain or enhance their marketability. Materials managed as part of a QRP are recycled through DRMO; proceeds are returned to an activity's Morale, Welfare, and Recreation (MWR) office.

RECYCLABLES: Materials that still have useful physical or chemical properties after serving their original purpose and can be reused or recovered for the same or other purposes. See Recycled Material.

RECYCLED MATERIAL: Material that can be utilized in place of a raw or virgin material in manufacturing a product and consists of materials derived from post consumer waste, industrial scrap, material derived from agricultural wastes or other items, all of which can be used in the manufacture of new products.

RECYCLING: Specifically: separating a given waste material (e.g. glass) from the waste stream and processing it so that it may be used again as a raw material for products which may or may not be similar to the original.

ROLL-OFF CONTAINER: A steel box with wheels used to collect waste at a site, such as a construction site, that can be rolled onto a truck using a winch and then taken to a disposal facility for discharge. The empty container can then be trucked to another site and rolled off the truck for stationary waste collection.

SHARPS: Discarded hypodermic needles, suture needles, syringes, scalpel blades, etc.

SOLID WASTE: A general term for discarded materials destined for disposal, but not discharged to a sewer or to the atmosphere. Solid waste(s) can be composed of a single material or a heterogeneous mix of various materials including semi-solids. However, the following material categories are not usually included:

- domestic sewage and/or other waste water sludges
- materials having value, salvaged for reuse, recycling or sale
- hazardous wastes
- agricultural and mining residuals
- abandoned vehicles.

SOLID WASTE DISPOSAL: Disposal of all solid wastes through landfilling, incineration, composting, chemical treatment, and any other method, which prepares solid wastes for final disposition.

SOLID WASTE MANAGEMENT: A planned program for effectively controlling the generation, storage, collection, transportation, processing and reuse, conversion or disposal of solid wastes in a safe, sanitary, aesthetically acceptable, environmentally sound and economic manner. It includes all administrative, financial, environmental, legal and planning functions as well as the operational aspects of solid waste handling and resource recovery systems.

SOURCE SEPARATION: The separation of recyclable materials at their point of generation by the generator.

STORAGE: The interim containment of solid waste, in an approved manner, after generation and prior to ultimate disposal.

VOLUME REDUCTION: To decrease the volume of solid waste by methods of incineration (90-98% reduction) or compaction (50-80% reduction).

WASTE OFFICE PAPER: Letterhead, dry copy papers, miscellaneous business forms, stationary, typing paper, tablet sheets, and computer printout and cards. Classified wastes are explicitly excluded, except as applicable security directives allow their inclusion.

WASTE REDUCTION: The practice of producing smaller quantities of disposable waste. Waste reduction usually entails changing manufacturing processes and packaging practices to foster more recycling and less dependency on disposable goods.

WHITE GOODS: Discarded kitchen and other large, enameled appliances.

YARD WASTE: Leaves, grass clippings, and other organic wastes produced as part of a yard and garden development and maintenance.

1.3 Relevant Laws, Regulations, and Guidelines

The Solid Waste Disposal Act (SWDA) of 1965, as amended by RCRA, requires that federal facilities comply with all federal, state, interstate, and local requirements concerning the disposal and management of solid wastes. Such requirements include permitting, licensing, and reporting. The SWDA encourages beneficial reuse of wastes through recycling and burning for energy recovery. Federal agencies are also required to procure EPA guideline products containing recovered materials to the maximum extent possible. The following sections summarize Navy, federal, state and local regulations and guidelines pertaining to solid waste management at NAVSTA Newport.

1.3.1 Navy Guidelines

Several Navy guideline documents pertaining to solid waste management and recycling have been reviewed and, where applicable, have been utilized in preparing this plan. The following sections briefly summarize the contents of these documents.

NAVFAC MO-213, Solid Waste Management, updated May 1, 1990

This guidance manual is a solid waste management planning guide for DOD personnel who are responsible for non-hazardous waste disposal. It includes a discussion on requirements, maintenance, and operations of solid waste collection, storage, disposal, recycling, and energy recovery systems.

OPNAVINST 5090.1B Change 3

This guideline requires all Navy activities to develop and implement SWMPs and defines the SWMP as a comprehensive study of all aspects of the activity's solid waste management program. It breaks down the SWMPs into five target areas; source reduction, recycling, energy recovery, waste treatment and contained disposal.

NFESC UA-2000-ENV

This guideline sets forth specifications for the SWMP Guide.

NEESA 5.0-004, Solid Waste Management Plan (SWMP) Guide

This guidance manual is intended to help DOD personnel develop and implement a SWMP. The manual is divided into five chapters from information gathering to plan implementation.

NFESC UA-2003-ENV

This guideline sets forth specifications for the QRP Development Guide.

NFESC-UG-2039-ENV

This guidance manual is intended to help DOD personnel develop and operate QRPs for Naval shore activities.

NAVMED COMINST 6280.1

This guideline is the instruction of infectious waste management for Naval medical treatment facilities.

1.3.2 Federal Regulations

Title 40 of the Code of Federal Regulations (CFR) Subchapter I regulates Solid Waste. Parts 240-258 of 40 CFR contain guidelines, requirements and criteria which deal with what is commonly referred to as “Municipal Solid Waste”, or mixed trash which is normally generated by residences and commercial establishments. Some of Parts 240-258 are not relevant to NAVSTA Newport as they regulate incinerators, landfills, and state solid waste management planning. Those parts which are relevant to NAVSTA Newport are summarized below.

It is important to note that, under Executive Order 11752, some of these relevant parts contain requirements for federal facilities and some contain recommendations, which are not mandatory. This distinction is highlighted (bold) in the following summaries. Although recommendations are not mandatory, they should be given serious consideration when developing a solid waste management program.

In the summaries below direct quotes as well as paraphrases have been utilized.

40 CFR 243: Guidelines for the Storage and Collection of Residential, Commercial and Institutional Solid Waste

This guideline applies to the collection of residential, commercial, and institutional *solid* wastes. It requires minimum levels of performance for solid waste collection and recommends procedures by which the objectives of the requirements can be met. The guideline sets forth requirements and recommendations for storage, safety, collection equipment, collection frequency and collection management.

Storage

Required: All solid wastes shall be stored in such a manner as to not constitute a hazard or result in spillage. Containers shall be maintained in a clean condition and shall be of adequate size to contain all solid wastes generated.

Safety

Required: "Collection systems shall be operated in such a manner as to protect the health and safety of personnel associated with the operation."

Collection Equipment

Required: "All vehicles used for the collection and transportation of solid waste" . . . "shall meet all applicable standards established by the federal Government and shall be enclosed so that while in transit, there can be no spillage."

Collection Frequency

Required: "Solid wastes shall be collected with the frequency sufficient to inhibit the propagation or attraction of vectors and the creation of nuisances. Solid wastes that contain food wastes shall be collected at a minimum of once during each week. Bulky wastes shall be collected at a minimum of once every three months."

Collection Management

Required: "The collection of solid wastes" . . . "shall be conducted in a safe, efficient manner, strictly obeying all applicable traffic and other laws. The collection vehicle operator shall be responsible for immediately cleaning up all spillage caused by his operations."

40 CFR 246: *Source Separation for Materials Recovery Guidelines*

This guideline sets forth requirements and recommends separation intended to reduce solid waste through the source separation of residential, commercial and institutional sources.

Required: "High-grade paper generated by office facilities of over 100 office workers shall be separated at the source of generation, separately collected, and sold for the purpose of recycling."

The recommended procedures provide *such* outlines as paper recovery, market studies, separation methods, storage, transportation, cost analysis, and public information and education.

40 CFR 247: *Guidelines for Procurement of Products That Contain Recycled Material*

This guideline is recommended, not required, to federal agencies, for the review of specifications and the procurement of products. It recommends procedures that can bring about the increased use

of recycled material in personal and real property procured by federal agencies if the recommendations are adopted by parties preparing specifications for products to be procured and by parties purchasing these products.

40 CFR 259: *Standards for Tracking and Management of Medical Wastes*

The purpose of this guideline is to establish *methods* for generators, transporters, and intermediate handling facilities that are involved in the tracking and managing of medical wastes.

Comprehensive Procurement Guidelines (CPG), has incorporated federal regulations **40 CFR 250, 40 CFR 252, and 40 CFR 253**. The CPG is the Environmental Protection Agency (EPA) guidelines used to promote the use of materials recovered from solid waste. Procuring agencies that purchase \$10,000 or more worth of a designated item during the course of their fiscal year, or that purchased at least \$10,000 worth of a procurement item during the preceding fiscal year are required to meet the federal procurement requirements. The EPA is required to identify products that are or can be made from recovered materials and to make recommendations concerning the procurement of items containing recovered materials. These items are designated in the CPG, which is updated annually. For each item designated in the CPG, the EPA publishes a corresponding recovered content level, which is published in a Recovered Materials Advisory Notice (RMAN). The CPG has set minimum recovered materials content standards for certain designated items and requires procuring agencies to purchase those items composed of the highest percentage of recovered materials practicable. The CPG designates items within 8 product categories, including paper and paper products, vehicular products, construction products, transportation products, park and recreation products, landscaping products, non-paper office products, and miscellaneous products.

Federal regulations **40 CFR 244**, *Solid Waste Management Guidelines for Beverage Containers*, and **40 CFR 245**, *Promulgation Resource Recovery Facilities Guidelines* have been repealed. A description of each of these former statutes is included below.

40 CFR 244

This former guideline set forth solid waste management guidelines for beverage containers. It was intended to reduce beverage container waste by implementing various requirements and encouraging container reuse and recycling.

40 CFR 245

This former guideline set forth the requirement, regionalization and planning procedures, establishment and utilization of resource recovery facilities. It applied to all federal agencies having jurisdiction over any real property or facility producing residential, commercial or industrial solid waste.

1.3.3 State Regulations

The State of Rhode Island Department of Environmental Management, Office of Environmental Coordination *Rules and Regulations for Reduction and Recycling of Commercial and Non-Municipal Residential Solid Waste* establishes the requirements for the reduction and recycling of commercial and non-residential solid waste. Mandatory recyclables stated in this regulation are summarized in the following table:

| TABLE 1 RHODE ISLAND MANDATORY RECYCLABLES FOR NON-MUNICIPAL RESIDENTIAL AND COMMERCIAL PROPERTIES | | |
|---|--|---|
| Non-Municipal Residential | Commercial | |
| 1. Newspaper 2. Glass food/beverage containers 3. Steel and steel coated tin cans 4. Aluminum cans/foil 5. HDPE milk/water containers 6. PET soda containers 7. Leaves and yard waste 8. Telephone directories 9. White goods | 1. Office paper 2. Corrugated cardboard 3. Newspaper 4. Used lubricating oil 5. Vehicle batteries 6. Automobiles 7. Aluminum 8. Glass food/beverage containers 9. HDPE milk/water containers | 10. PET soda containers 11. Steel and steel coated tin cans 12. Laser printer toner cartridges 13. Leaves and yard waste 14. Telephone directories 15. White goods (appliances, etc.) 16. Wood waste 17. Coated unbleached kraft beverage carriers |

The commercial and non-municipal residential solid waste regulations were adopted pursuant to several Rhode Island General laws, including the following:

1. Regulation 23-18.8-2 (Solid Waste Management Corp)

This regulation requires that all capable solid waste be recycled, and as a target, no less than 15% of the solid waste generated in the State should be disposed through recycling.

2. Regulation 23-18.9-1(a)(1)

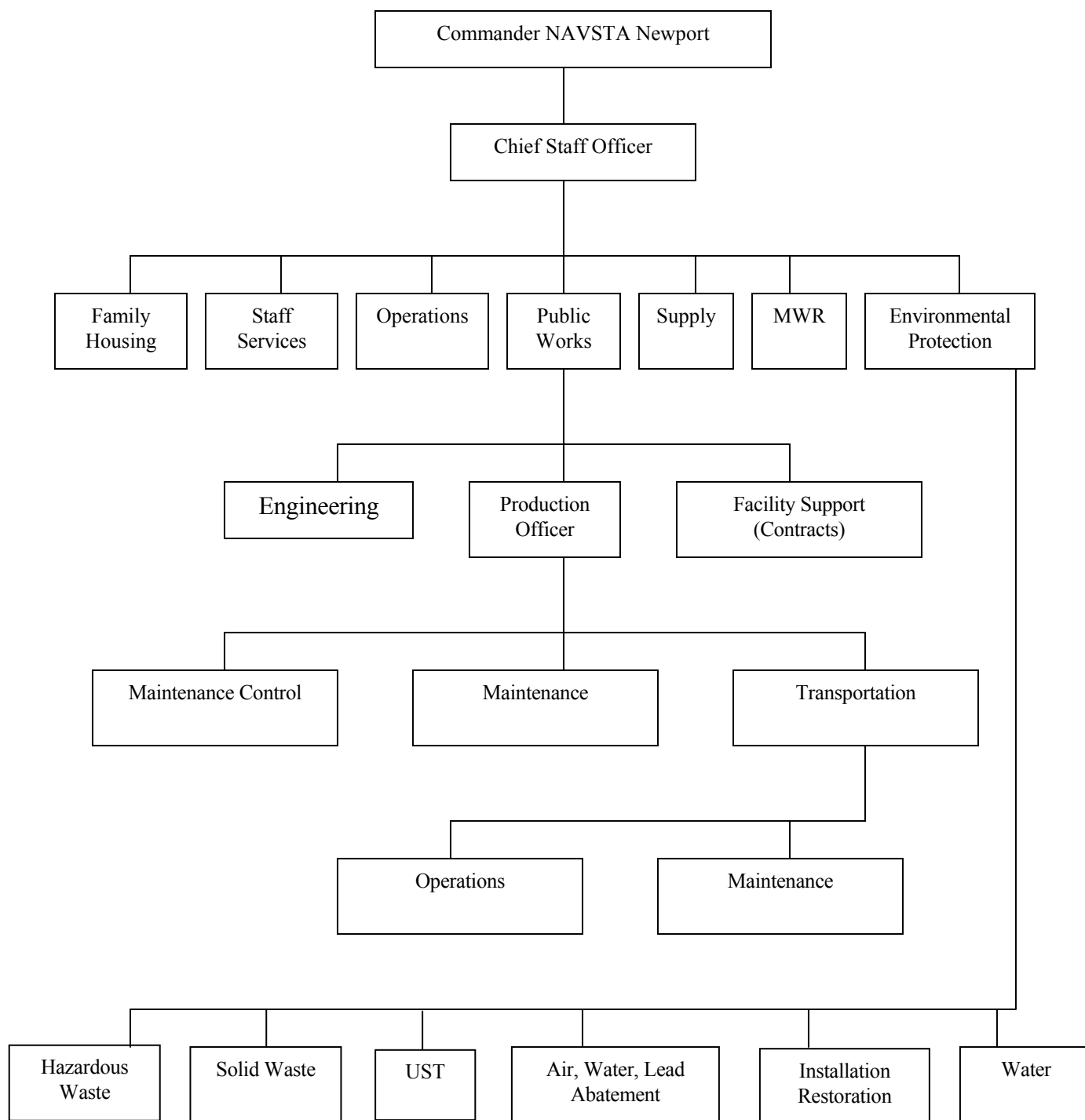
This regulation requires each city and town to separate solid waste into recyclable and non-recyclable components. During the first three years after a city or town enters the recycling program, they shall be deemed to have achieved compliance with the requirement of separation if that city or town has achieved at least the same percentage of separation as achieved by similar communities with compulsory programs.

1.3.4 Local Regulations

Title 8, Chapter 8.24.050, of the Codified Ordinances of the City of Newport, Rhode Island, requires that certain materials be recycled, including glass, tin cans, scrap metal, empty aerosol and paint cans, aluminum, paper, mail, magazines, phone books, paper books, writing paper, corrugated cardboard, paperboard, plastics, cartons, milk and juice cartons, drink boxes (aseptic containers), textiles, leaf and yard waste, and Christmas trees.

1.4 Organizational Chart

The following organizational chart indicates the parties at NAVSTA Newport who are responsible for various aspects of solid waste planning, collection, disposal, and recycling.



1.5 Project Goals

The project goals are discussed below:

- Goal 1: Update the SWMP to ensure that it satisfies the requirements of OPNAVINST 5090.1B Change 3.
- Goal 2: Review existing and proposed collection and disposal practices and confirm their adequacy and/or recommend improvements.
- Goal 3: Provide a Dumpster Location Plan (DLP) that meets the current requirements for dumpster locations relative to surrounding buildings and in support of solicitation for a new solid waste contractor.
- Goal 4: Project future conditions and propose appropriate collection and disposal practices, if needed.
- Goal 5: Review existing procedures for procurement of goods with recycled material content and make recommendations.
- Goal 6: Review and updated recommended source reduction practices.
- Goal 7: Review and update recommended education and training techniques for solid waste generators in the various tenant commands.
- Goal 8: Evaluate available data on solid waste reduction & recyclable recovery.

1.6 Installation Description

NAVSTA Newport installation consists of seven areas. A brief description of each area follows. More detailed information on each building is contained in subsequent sections of this Plan.

- 1) Coddington Cove
- 2) Coddington Point
- 3) Coasters Harbor Island
- 4) Naval Hospital
- 5) Fort Adams
- 6) Medway
- 7) Melville North and South

The Armed Forces Reserve Center in Providence, Rhode Island, is also covered under this SWMP. Naval Underwater Warfare Center is excluded from this Plan at this time since it has its own SWMP.

1.6.1 NAVSTA Newport

The areas listed above consist primarily of commercial operations or services. The NAVSTA Newport commands are listed below.

- Command Leadership School
- Document Automation and Production Service
- Defense Commissary Agency
- Defense Security Service
- Explosive Ordnance Disposal Mobile Unit Two Detachment Newport
- General Support Motor Transport Company, 6th Motor Transport Battalion (Providence, RI)
- Human Resources Office Site Newport
- Marine Corps Detachment
- Mobile Inshore Undersea Warfare Unit
- Naval Academy Preparatory School (NAPS)
- Naval Ambulatory Care Center
- Naval and Marine Corps Reserve Center (Providence, RI)
- Naval Criminal Investigative Service (NCIS), Northeast Field Office
- Naval Dental Center Northeast
- Naval Education and Training Center (NETC)
- Naval Health Care New England
- Naval Justice School
- Naval Reserve Readiness Command, Northeast
- Naval Station Newport
- Naval Training Meteorology and Oceanography Detachment
- Naval Undersea Warfare Center (NUWC)
- Naval War College
- Naval Undersea Warfare Center Division Newport
- Navy Warfare Development Command
- Navy Band Northeast
- Office of Naval Intelligence Detachment, Naval War College
- Officer Indoctrination School
- Personnel Support Activity Detachment
- Senior Enlisted Academy
- Space and Warfare Command
- Naval Computer and Telecommunications Area Master Station, Atlantic Detachment
- Surface Warfare Officers School (SWOS) Command
- U.S. Coast Guard Maintenance Facility
- First Coast Guard District
- U.S. Coast Guard Cutter Juniper (WLP-201)
- U.S. Coast Guard Cutter Willow (WLP-202)
- U.S. Coast Guard Cutter Ida Lewis (WLM-551)

Source: Commanding Officer/Executive Officer Listing, Newport Area Command (8 November 2002)

Listed below are brief descriptions of these operations and the general nature of the solid wastes generated at each, with the exception of the Naval Undersea Warfare Center.

Education and Administration

Several schools are in operation at NAVSTA Newport. Each school maintains lecture halls, administrative offices and training facilities. Activity at the schools fluctuates during the year depending on program duration. The activities associated with the schools generate the same basic type waste stream, consisting predominantly of paper.

Commercial Support Operations

Commercial operations have been established at the NAVSTA Newport installation to provide goods and services for naval operations, naval personnel, and families of naval personnel. These commercial operations include but are not limited to the following:

- Navy Credit Union – Building 657, Coddington Point
- The Navy Exchange —Building 1250, Coddington Point
- Commissary – Building 1163, Coddington Point
- Supply Department – Building 47, Coddington Point
- Uniform Shop —Building 1903, Coddington Point
- Package Store - Building 1901, Coddington Point
- NEX Gas Station – Building 1285, Coddington Point
- Thrift Shop – Building 305, Coddington Point
- Auto Hobby Shop – Building 304, Coddington Point
- Self Help Centers – Building 47 and 15, Coddington Cove
- Self Help Centers - Building T375, Fort Adams
- Commissary Annex – Building 402, Fort Adams
- Commissary Annex – Building 369, Midway
- Hazmin Center – Building 1166, Coddington Cove

Most of these operations generate a similar solid waste stream, including large quantities of cardboard.

Medical Services

Medical services at NAVSTA Newport include:

- Naval Ambulatory Care Center – Building 23, Coasters Harbor Island
- Naval Dental Center – Building 1173, Coddington Point
- Naval Outpatient Services – Building 43, Coasters Harbor Island
- Dental Outpatient Services – Building 686, Coasters Harbor Island

The medical facilities generate three basic solid wastes: medical waste, office waste, and mixed trash.

Food Services

There are currently four locations where prepared foods are served:

- Recreation Center – Building 656, Coddington Point
- Officers Club – Building 95, Coasters Harbor Island
- Galley – Building 292, Coddington Point
- Noble Romans Pizza – Building 1255, Coddington Point

The solid wastes generated include food waste, mixed trash, cardboard, bottles and cans.

Public Works Operations

The Public Works Operations include all operations and locations used for the purpose of NAVSTA Newport upkeep and maintenance. PWD operation generates a wide variety of solid waste.

- Limited Vehicle Maintenance – Building A9, Coddington Cove
- Electrical Service – Building 1, Coddington Cove
- Utilities – Building 25, Coddington Cove
- Housing Maintenance – Building A63, Coddington Cove
- Electrical Maintenance – Building A63, Coddington Cove
- Steam Generation – Building 7, Coddington Cove
- Steam Generation – Building A6, Coasters Harbor Island
- Pest Control – Building 1298, Coddington Cove
- Carpentry Shop – Building A63, Coddington Cove
- Paint Shop – Building A63, Coddington Cove

1.6.2 Housing

There are two basic types of housing offered by NAVSTA Newport. They include Combined Bachelor Housing (CBH) and naval family housing. The CBH buildings are:

- Building 172, Coasters Harbor Island
- Building 442, Coasters Harbor Island
- Building 443, Coasters Harbor Island
- Building 444, Coasters Harbor Island
- Building 447, Coddington Point
- Building 678, Coddington Point
- Building 688, Coddington Point
- Building 689, Coddington Point
- Building 1313, Coddington Point
- Building 1314, Coddington Point

Naval family housing areas are:

- Farragut Field - Coddington Point
- Green Lane - Midway
- Connell Manor – Coasters Harbor Island
- Hart Field – Coddington Point
- Fort Adams – Fort Adams
- Capehart – Melville (North)
- Melville Trailer Park – Melville (North)
- Rainbow Heights – Melville (North)
- Public Quarters – Naval Hospital
- Public Quarters - Coasters Harbor Island
- Anchorage - Coddington Cove

1.6.3 Armed Forces Reserve Center, Providence, RI

The solid waste stream at this facility consists of mixed trash, scrap metal, wood, mixed paper, and mixed recyclables. The facility is operational at approximately 2% capacity most of the time and operates at near 100% capacity approximately one weekend per month. During this one weekend per month, most of the solid waste and recyclables are generated. Browning Ferris Industries (BFI), is currently responsible for disposal of solid waste from this facility.

2.0 EXISTING SOLID WASTE COLLECTION AND DISPOSAL

The existing Solid Waste Collection, Recycling, and Disposal Contract awarded to Enviro-Safe Company (formerly Nunes) in 1999 consolidated all solid waste pickup and recycling activities at the NAVSTA Newport including the housing areas. The contract was for 12 months with four option years attached. Solid waste pickup started in June 1999 for all of NAVSTA Newport including housing. The pickup of recyclables in housing started in June 1999 also. Pickup of recyclables on the NAVSTA Newport started in October 1999. Mixed trash generated by both the family housing units and tenant commands is ultimately disposed of at the Rhode Island Central Landfill in Johnston, Rhode Island.

A new contract, awarded in April 2003, will continue the above-described processes of mixed trash and recyclable pickup and disposal, with additional pickup locations.

2.1 Housing

The solid waste generated by housing typically consists of mixed trash and recyclables. Collection and disposal of municipal solid waste and recyclables from family housing units at Fort Adams, Melville (North and South), Midway and NAVSTA Newport are by contract. The contract for solid waste collection at naval family housing includes separate recyclable collection for material separated by residents. Residents place their recyclable materials including newspaper, glass, tin cans, aluminum, plastic, mixed paper, and cardboard in individual household recycling bins for curbside collection. The disposable solid waste and recyclable solid waste is picked up weekly.

2.2 NAVSTA Newport Complex

Private contractors carry out collection and disposal of municipal solid waste and most recyclables from commercial base operations at NAVSTA Newport. Since there is no practical method for weighing waste from individual tenants, each tenant is charged by container pick-up. The pick-up schedule is designed to collect waste when dumpsters are full or almost full, and the assumption is made in accounting and levying charges that they are full. Installation personnel or custodial contractors transport mixed trash and recyclables from the point of generation to the dumpsters and recycle containers provided. The solid waste removal contractor empties the dumpsters and recycling containers. The contractor provides NAVSTA Newport with a monthly report summarizing total mixed trash, mixed paper, cardboard, and mixed recyclables removed and disposed off base.

Weight slips for recent NAVSTA Newport MSW disposal by the contractor are somewhat general and do not mention that the waste was generated at NAVSTA Newport. They state "Contracted commercial waste, Block A, Rhode Island in state waste".

When work that will generate solid waste, such as construction or demolition, is done by outside contractors, NAVSTA Newport requires the contractor to recycle wood, cement, scrap metal, and all other items listed under the commercial section of Table 1. Each contractor is required to provide their own solid waste collection and disposal for non-recyclable materials and submit weight slips for disposal of solid waste and recyclable materials to NAVSTA Newport.

2.3 Armed Forces Reserve Center, Providence, RI

BFI presently provides mixed trash and plastic and white paper (unshredded) recyclable disposal from the Armed Forces Reserve Center. NAVSTA Newport requires that weight slips be provided by BFI for both solid waste and recyclable materials disposal.

2.4 Proposed Dumpster Location Plan (DLP)

In November 2002, *Nobis* performed a dumpster location survey of all trash dumpsters, roll-offs, and recycling containers at NAVSTA Newport. The purpose of the survey was to evaluate existing dumpster and recyclable container locations. From this survey, a new DLP was constructed in an effort to meet the current requirement of dumpster placement at a distance greater than 75 feet from NAVSTA Newport buildings without compromising convenience and efficiency. An additional objective was to identify locations where compactors could be placed as a means of cost savings for NAVSTA Newport. NAVSTA Newport plans to place compactors for cardboard at 5 locations (Buildings 95CHI, 292CP, 991CHI, 1901CP, and 1250CP) and placement of 7 compactors for solid waste (Buildings 1CC, 47CC, 95CHI, 197CP, 292CP, 991CHI, and 1250CP) during the next few years beginning in 2004. *Nobis* has been requested by NAVSTA Newport to recommend compactor locations based on our findings. Refer to the recommendations for the compactors in the DLP. The DLP is attached as Appendix A.

2.5 Dumpster Survey

The dumpster survey referred to in the October 2000 SWMP was performed in January 1999 by NAVSTA Newport. The 1999 dumpster survey was reportedly performed over a three day period and included a visual survey of dumpster contents. Approximately 10% of the 1999 survey was performed by obtaining weight measurements of the solid waste in the dumpsters to determine percentages. The 1999 survey data indicated that the average percentage of recyclable materials disposed as mixed trash was approximately 61%.

In December 2002, *Nobis* Team personnel performed a survey of the Armed Forces Reserve Center in Providence, Rhode Island. One mixed trash solid waste dumpster is present at this facility. During this review, it was noted that recyclable materials were improperly disposed in the mixed trash dumpster. It was also noted that accumulated metal debris, bagged mixed trash, wooden pallets, plastic recyclables, and cardboard boxes were observed on the ground surface around the dumpster.

In January 2003, *Nobis* performed a survey of the trash dumpsters at NAVSTA Newport. Approximately 90% of the dumpster containers were surveyed. The purpose of the survey was to obtain data to evaluate the recycling /mixed trash reduction effort. The dumpster survey data is included as Appendix B.

The dumpster survey was performed by visually estimating the fullness of each container and estimating the percentage of recyclable materials and mixed trash present in each container. Percentages of mixed recyclables were divided into cardboard, mixed paper, and miscellaneous (scrap metal, wood, compact discs, etc.) categories. The estimated percentages were based on visually inferred relative weights of the materials. Some of the recyclable containers were also surveyed to determine if actual use is consistent with intended usage for these containers.

The 2003 dumpster survey data indicate that overall, NAVSTA Newport is recycling most recyclable materials. Approximately 11% of recyclable materials were disposed as mixed trash. Compared to the 1999 dumpster survey data, there appears to have been a 50% decrease in the percentage of recyclable materials disposed of as mixed trash. The limitations of this survey are inherent in the methods used and vary based upon the fullness of the dumpsters (i.e., in dumpsters with more than one “level” of trash present, a visual survey can only identify materials present in the “top layer”), whether the bagged mixed trash was in clear or black plastic bags, and human error/bias. The survey was performed over the course of a single day and therefore the data does not represent changes in dumpster content with time or take seasonal variation into consideration. However, the time of year that the survey was conducted and the methods used to perform the survey were similar to when and how the 1999 visual dumpster survey was performed.

The survey data indicate that cardboard is the recyclable material most often disposed of as mixed trash. During the survey, it was noted that several of the brown dumpsters that are normally labeled “Cardboard Only” were unlabeled and being used for disposal of mixed trash. During the survey, a person was observed placing a cardboard box full of an unknown material within a mixed paper recycling container. The box was not recycled separately. Consistency on the part of dumpster and type (i.e., color) and proper labeling may help to ensure that more cardboard is

separated from mixed trash. Additionally, the mixed paper and mixed recyclable containers were not clearly distinguishable because they are the same color and some were noted to be unlabeled/unreadable.

2.6 Other Solid Wastes

In addition to "municipal solid waste" (MSW) or "mixed trash," NAVSTA Newport operations generate other solid wastes. These other wastes are listed below and discussed in subsequent subsections.

- Biomedical Waste
- Bulky Waste
- Compostable (organic) Materials

2.6.1 Biomedical Waste

Under state and federal regulations, biomedical waste is a separate category of waste and is neither a Solid Waste, a Special Waste, nor a Hazardous Waste. The Naval Ambulatory Care Center and Dental Center at NAVSTA Newport generate an annual average of 350 boxes of biomedical waste. Biomedical waste is collected in red bag containers or sharps boxes. The weight of these boxes averages approximately 20-30 pounds. The red bags and sharps boxes are collected at a secure deposit site, in Building 23CHI, where they are packed in Bio Hazard boxes and are immediately sealed. The sealed boxes are placed in a designated area in Building 23CHI in temporary storage. Transportation and disposal of the bio-medical waste is conducted under contract by Stericycle, a biomedical waste transporter licensed to operate in Rhode Island. Under the current contract, all biomedical waste is incinerated.

2.6.2 Bulky Waste

For all practical purposes, bulky waste or demolition debris, is not managed directly by NAVSTA Newport. Bulky waste is generated at NAVSTA Newport primarily when housing or other buildings are renovated. Generally, each outside construction contractor is required to dispose of the construction debris after all recyclable materials have been segregated for recycling. Weight slips for disposal or recycling of these materials are required to be submitted to NAVSTA Newport on a monthly basis.

2.6.3 Compostable Materials

The current grounds maintenance contract for NAVSTA Newport requires that all compostable materials including plant clippings to be brought to a composting facility in Bristol, Rhode Island. Mulching lawn mowers are required to be used in the grounds maintenance contract, so there is no need for disposal of grass clippings. The contractor is required to submit weight slips for disposal of this material at the composting facility. Additionally, a dumpster for compostable materials will be placed adjacent to Building 47CC in April 2003 for disposal of these materials by NAVSTA Newport personnel and residents.

Two food pulpers are currently in-use at the Galley, the largest food service location on the base. Two more food pulpers are scheduled to be installed (one at the Galley and one at the Officer's Club (O'Club)). These units reduce food waste quantities by approximately 90%. The "ash" material from these pulpers is then disposed of with the mixed trash.

The Commissary currently collects bread, fruits, and vegetables for a livestock on a local farm. This material is removed from NAVSTA Newport by the farmer every other day.

2.7 Roles and Responsibilities

All residents and personnel of NAVSTA Newport play an important role in ensuring that solid waste disposal is conducted in the appropriate manner. Everyone must be responsible for separating mixed trash from recyclable materials and ensuring that these materials are placed in the proper containers.

3.0 EXISTING RECYCLING

3.1 Qualified Recycling Program

A QRP was developed by the NAVSTA Newport Environmental Division in 1994 with guidance published in April 1991 in the form of Qualified Recycling Program Development Guide, NEESA 5-010A. The purpose of QRP is to support the recycling policy set forth in OPNAVINST 5090.1B Change 3 (see Section 1.3). An installation specific QRP establishes a recycling program which allows the installation to receive 100% of the proceeds from recyclable material sales. The market for any recycled material is either the Defense Reutilization and Marketing Office (DRMO) or a private sector market contract put in place by the Supply Department.

Scrap metal, aluminum cans, compact discs, and batteries are brought to Building 47CC for recycling. Scrap metal is collected at the scrap metal yard and aluminum cans, compact discs, and batteries are collected at the recycling center (Building 47CC). The Recycling Center coordinates sales of these recyclable materials.

Glass, tin cans, plastics, newspapers, cardboard, mixed paper, aluminum foil/cans, mixed recyclables, and wood are all recycled at NAVSTA Newport under contract with a disposal contractor. The contractor provides recycling containers at locations across NAVSTA Newport specified in the contract. The contractor collects these commodities on an agreed upon schedule and takes them either to their own facility or to another recycling facility for sorting and sale. Weight slips for all recyclables and solid waste removed from NAVSTA Newport are provided to the Environmental Protection Department. The weight slips are used to generate a monthly report that consolidates the majority of the recycling and solid waste activities of NAVSTA Newport into a single format and document. This report aids in assessing the amount of materials recycled on NAVSTA Newport.

NAVSTA personnel that perform outstanding efforts or provide innovative ideas for the recycling program are rewarded from the recycling fund. The Qualified Recycling Board (QRB)

is responsible for initiating and recommending various awards. Supervisors are expected to provide recommendations to the QRB based upon their observations.

3.1.1 Rebate Program

The current recycling contract provides for rebate of monies obtained from cardboard and mixed paper recyclables generated by family housing and NAVSTA Newport commercial operations. Monies generated from family housing and commercial operation mixed recyclables are not included in the rebate check because there is currently no market for the sale of these materials that would provide a rebate to NAVSTA Newport. The existing contractor records the quantities of cardboard and mixed paper products (separately) picked up at the locations identified in the contract and provides a report at the end of each month summarizing the quantity of recyclables picked up and recycled. The rebate check is based on the monthly Paper Stock report. The average price per ton of paper or cardboard is rebated to NAVSTA. A rebate check is sent on a monthly basis for the mixed paper and cardboard recyclables to:

Command Navy Region Northeast
Finance Office
Attn: Denise Clarke
1 Simonpietri Drive
Newport, Rhode Island 02841

The contractor also submits a copy of the rebate check, an itemized list of the recyclable quantities, a cost per tonnage credited as a rebate, and a copy of the Monthly Stock Report used for the rebate cost calculation to NAVSTA Newport, Public Works, FSC Division, on a monthly basis.

Rebate monies and other monies generated by recyclable sales are placed in a holding account overseen by the Comptroller. This money is used to cover overhead for the recycling program. Fifty percent of remaining monies may be spent on environmental programs or occupational safety and health activities and fifty percent of the money can be transferred to the MWR account. Alternatively, 100% of the rebate proceeds can be spent by the MWR office. Proposed expenditures from this fund are presented to the QRB for review. The QRB recommends expenditure to the Commanding Officer of NAVSTA Newport, who is the final approving authority.

3.2 NAVSTA Newport Recycling Procedures

The following sections detail specific recycling procedures that have been implemented by NAVSTA Newport.

3.2.1 General

- The Recycling Center accepts scrap metals, lead acid batteries, alkaline batteries, and compact discs. The Recycling Center is located in Building 47CC across from the scrap

metal yard. An appointment is made with property disposal personnel to drop off material at the Recycling Center.

- All containers previously holding food stuffs are cleaned by the source (*i.e.*, person recycling the item) so that they are free of liquids and food debris.
- All customers turning in aluminum cans at Building 47CC receive a receipt.

3.2.2 Sorting

- Recyclable items are source-separated (*i.e.*, each individual responsible for recycling the item shall place it in the designated receptacle in their area or building).
- All items brought to Building 47CC are placed in the designated container. All trash or contaminants are removed by the source to ensure that the value of the whole load is not reduced or made unmarketable.

3.2.3 Commodities

- Aluminum cans are completely empty, rinsed, and bagged before bringing to Building 47CC. Recycling Center personnel weigh the bags of aluminum cans and provide a receipt to the customer. Sales occur quarterly and revenues are placed into the respective department or tenant commands' MWR recycling holding account. A specific form is used to request withdrawal of funds from the holding account.
- Compact discs and alkaline batteries will be turned in directly to the recycling center. Compact discs are scratched in a manner so that computer CD-ROM players may not access them. Personnel dropping off other recyclables transport the material in the contractor supplied receptacles to the containers located across from the recycling center. Newspapers and magazines are placed in the last two compartments of the multi-compartmentalized container located outside the scrap metal yard.
- Corrugated cardboard is placed into contractor-owned dumpsters located across NAVSTA Newport. The contractor collects and empties the dumpsters and processes the contents off site for sale.
- One mixed floor type paper container is located at every workstation for collection of all paper products. Paper from the floor type paper containers is collected by the custodial contractor and placed into the recycling containers labeled "mixed paper" outside of each building.
- All scrap metals are turned in to the scrap metal yard adjacent to the recycling center. Customers receive a weight slip from the scale house prior to turn in for large loads.
- Turn-in of lead acid batteries is coordinated with the recycling center to ensure that the proper storage devices are in place.
- Used oil is turned in to the MWR auto hobby shop located in Building 304CP. The used oil is then removed for recycling by a contractor.
- Yard waste is collected in designated roll-offs and recycled by the solid waste/recycling contractor.
- Glass, plastics, tin cans, and small metal pieces may be placed in the recycling station bin labeled mixed recycling. The custodial contractor will empty the mixed recyclable station once per week to the recycling containers outside each building.
- Wood will be placed in one of the dumpsters located outside Building 47CC.

3.3 Roles and Responsibilities

The proper functioning of the QRP is dependant upon individuals at NAVSTA Newport performing their expected roles and responsibilities, as outlined below.

3.3.1 Commanding Officer

The NAVSTA Newport Commanding Officer shall:

- Ensure all departments of NAVSTA comply with applicable Regulations, Executive Orders, and Instructions pertaining to recycling;
- Ensure each department head designates a Recycling Coordinator from his/her department in writing to the Environmental Protection Department; and
- Approve all Recycling account expenditures

3.3.2 Commanding Officer/Officers in Charge

The NAVSTA Newport Commanding officers and Officers in Charge of tenant activities must participate as required by complying with all applicable Regulations, Executive Orders, and Instructions pertaining to recycling and by designating, in writing, Recycling Coordinators for their department or command

3.3.3 Qualified Recycling Board

The NAVSTA Newport recycling board membership will be comprised of representatives from NAVSTA Newport Environmental Protection Department Supervisor or Engineer (Chairperson), MWR Department Head or designated representative, Comptroller or designated representative, Supply Department, Public Works Engineering Department, and other Tenant command representatives as required or invited. The QRB shall:

- Foster awareness of the recycling program to all NAVSTA Newport departments, storefronts, and tenant commands;
- Review and recommend projects for funding from the recycling suspense account to the Commanding Officer, NAVSTA Newport;
- Meet to plan and coordinate the recycling programs; and
- Ensure the cost of operations for the recycling program is paid from the suspense account (if operation costs exceed cost avoidance) prior to dispersing the money for any other purpose.

3.3.4 Public Affairs Office

The NAVSATA Newport Public Affairs office shall Assist with promotion and publicity of the NAVSTA Newport recycling program.

3.3.5 Public Works Department

The NAVSTA Newport Public Works Department shall:

- Ensure non-MWR projects considered for funding from the recycling suspense account are consistent with NAVSTA Newport's master plan;
- Coordinate design and construction of projects selected for funding from the recycling suspense account;
- Prepare and/or review all contracts for NAVSTA Newport, ensuring that recyclable materials (where applicable) are used in new construction projects; and
- Ensure that contracts specify that recycling of various items is required and provide language in each contract to require contractors to turn all scrap metal into the scrap metal yard or an alternative area, as specified by the Resident Officer in Charge of Construction (ROICC), for resale.

3.3.6 ROICC and Facilities Support Contracts

ROICC and Facilities Support Contracts shall:

- Ensure that contracts contain language requiring the contractor to turn over scrap metal to the government for recycling purposes, and to ensure all scrap metal is delivered to the area designated in the contract; and
- Ensure that the contractor submits a recycling report with weight slips and a post-consumer content report of used materials.

3.3.7 Comptroller

The NAVSTA Newport Comptroller shall:

- Ensure that projects considered for funding from the recycling suspense account are consistent with NAVSTA Newport's pollution prevention, environmental, and MWR objectives;
- Accept reimbursements from DRMO and from commercial recyclers for direct sales of recyclable materials from NAVSTA Newport, and to ensure that funds are credited to the recycling suspense account;
- Establish and maintain financial accounting records, procedures, and supporting documents for funds received and disbursed from the sale of recyclable materials;
- Prepare and distribute the Recyclable Fund Status Report quarterly to the QRB; and
- Ensure the balance of funds received from the sale of recycle materials does not exceed \$2 million at the end of the fiscal year.

3.3.8 Supply Operations

NAVSTA Newport Supply Operations shall:

- Coordinate collection for sale of all metals (except precious metals), maintaining direct sale authority;
- Review records maintained by property disposal concerning quantities and types of materials turned in by NAVSTA Newport for sale under the QRP;
- Maintain all records pertaining to the direct sale of recyclable materials; and
- Operate the scrap metal yard and manage the recycling process for all materials brought to Building 47CC.

3.3.9 Fire Department

The NAVSTA Newport Fire Department shall review all locations for storage of combustible and non-combustible recycling materials to ensure that the designated storage areas are safe to life and property.

3.3.10 Housing Division

The NAVSTA Newport Housing Division shall:

- Ensure all housing residents participate in and recycle the required items as listed in Executive Order 12873;
- Provide adequate recycling containers for each housing address; and
- Ensure the housing residents are given recycling requirements in writing upon initial arrival and are provide periodic mailings with recycling instruction reminders.

3.3.11 NAVSTA Newport MWR Department

The NAVSTA Newport MWR Department shall:

- Participate as a QRB member in support of the recycling program;
- Establish and maintain holding accounts for all departments of NAVSTA Newport and all tenant commands; and
- Issue checks to tenant commands or departments within 10 days of the date of request.

3.3.12 NAVSTA Newport Environmental Supervisor/Engineer

The NAVSTA Newport Environmental Supervisor/Engineer shall:

- Serve as the overall program coordinator and chairperson of the QRB; to provide minutes of the QRB meetings.
- Maintaining the local recycling instruction under the direction of the QRB.
- Developing and maintaining the Solid Waste Management Plan and the associated instruction.

- Suggesting to the QRB environmental projects that can be funded from the recycling account.

3.3.13 NAVSTA Newport Safety Department

As part of regularly scheduled building inspections, the NAVSTA Newport Safety Department shall inspect locations used to store recyclable materials to ensure that the designated storage areas are safe for occupational work.

3.3.14 Recycling Coordinators

The NAVSTA Newport Recycling Coordinators shall:

- Ensure recycling collection stations in their areas are kept clear and accessible, all containers in the station are labeled properly and closed at all times, and trash and debris does not accumulate on the top or sides of the station;
- Increase awareness of what types of items are required to be recycled and where to place them for recycling;
- Ensure station containers are emptied weekly either by a janitorial contractor or designated person;
- Bringing all aluminum cans to Building 47CC to be weighted and return the weighing receipt to the command;
- Attend training given by the QRB annually (at a minimum) and to implement changes to the recycling program as deemed necessary to meet goals and objectives initiated by the QRB; and
- Provide training to new employees and annual refresher training for existing personnel. Alternatively, Recycling Coordinators may request that the Environmental Department provide the training.

3.3.15 Individuals Working at NAVSTA Newport

Individuals Working at NAVSTA Newport shall:

- Be aware of and adhere to the SWMP;
- Become aware of the recycling program and take the additional steps necessary to recycle;
- Be proactive within their work centers and offices and encourage recycling; and
- Assist the recycling coordinator whenever possible.

3.4 Housing Recycling

This section discusses recycling at the family housing units located at Fort Adams, Midway, Melville, and NAVSTA Newport. As discussed in Section 1.3, all Navy activities are subject to all local, state and federal regulations governing solid waste management and recycling.

In accordance with the Rhode Island Refuse Disposal Law title 23 Section 18.9-1.(a)(1), each city and town is required to separate solid waste into recyclable and non-recyclable components before

such waste is disposed of in any state owned facility. The recycling program for the NAVSTA Newport housing units is consistent with these requirements.

Navy personnel residing in NAVSTA Newport family housing units are required to implement curb side recycling for their residence. Each residential unit is provided with a blue bin for the collection of mixed recyclables. The mixed recyclables to be collected include: plastic, glass, tin cans, aluminum foil/cans, other metals, cardboard and newspapers. Each resident places these materials at the curbside for pickup by a solid waste transporter contracted by NAVSTA Newport.

As discussed in section 3.1, a standard monthly reporting form accompanied by weight slips for these materials are furnished to NAVSTA Newport by the contractor. Weights reported for individual recyclable streams such as glass, plastic, etc., are based on overall average yields from all truckloads processed by the contractor. Table 2 summarizes the amount of recyclable material diverted, total solid waste generated, and percentage of the waste stream diverted for the family housing units in 2000, 2001, and 2002. This data is based on monthly reports forwarded to NAVSTA Newport by the present solid waste contractor. Please refer to Appendix C for copies of the solid waste weight data provided by the Environmental Protection Department.

| TABLE 2 FAMILY HOUSING RECYCLABLE MATERIALS AND SOLID WASTE GENERATION NAVSTA NEWPORT, RI | | | |
|--|--|-----------------------------|---|
| Year | Recyclable Materials (tons) | MSW Generated (tons) | Percent of Diverted (Recycled) Solid Waste |
| 2002 | 262.53 | 1383.01 | 15.95 |
| 2001 | 237.72 | 1404.45 | 14.48 |
| 2000 | 220.24 | 1280.66 | 14.67 |

3.5 NAVSTA Newport Commercial Recycling

Since contracting with an outside contractor to provide trash collection and disposal along with recyclables, NAVSTA Newport has reduced its dependency of recycling activities using base personnel. Current NAVSTA Newport recycling duties are limited to collection of scrap metal, aluminum cans generated by NAVSTAT Newport commercial operations, batteries, and compact discs. Disposition of all remaining recyclable materials is the responsibility of the contractor. Table 3 illustrates the type and weight of recycled materials processed by both the contractor and the NAVSTA Newport recycling center for 2000, 2001, and 2002. This information was provided by the Environmental Protection Department.

| TABLE 3 COMMERCIAL RECYCLABLE QUANTITIES (TONS) NAVSTA NEWPORT, RI | | | |
|---|-------------|-------------|-------------|
| Material | 2002 | 2001 | 2000 |
| Aluminum | 0.29 | 0.22 | 0.69 |
| Steel | 129.12 | 229.01 | 229.77 |
| Copper | 0.00 | 0.10 | 0.14 |
| Brass | 2.05 | 0.46 | 0.68 |
| Stainless Steel | 0.00 | 0.00 | 0.00 |
| Lead | 0.00 | 1.14 | 1.04 |
| Cardboard | 417.57 | 420.05 | 419.37 |
| Mixed Paper | 102.62 | 94.39 | 98.45 |
| Mixed Recyclables (plastic, etc.) | 60.47 | 32.87 | 48.96 |
| Wood | 178.94 | 168.68 | 116.13 |
| Compact Discs | 0.00 | 0.02 | 0.15 |
| Batteries | 13.36 | 14.07 | 16.61 |
| White Goods | 0.00 | 2.14 | 0.00 |
| Christmas Trees | 10.00 | 3.50 | 11.20 |
| Leaf and Yard waste | 304.73 | - | - |
| Other | 11.56 | 3.89 | 30.14 |

Table 4 summarizes the amount of recyclable material diverted, total solid waste generated, and percentage of the waste stream diverted for base commercial operations in 2000, 2001, and 2002. This data is based on monthly reports forwarded to NAVSTA Newport by Enviro-Safe.

| TABLE 4 COMMERCIAL RECYCLABLE MATERIALS AND SOLID WASTE GENERATION NAVSTA NEWPORT, RI | | | |
|--|--|-----------------------------|---|
| Year | Recyclable Materials (tons) | MSW Generated (tons) | Percent of Diverted (Recycled) Solid Waste |
| 2002 | 1230.69 | 2377.22 | 34.11 |
| 2001 | 973.38 | 2918.82 | 25.01 |
| 2000 | 1040.87 | 2723.14 | 27.65 |

The NAVSTA Newport combined (housing and base commercial operations) diversion rate for Years 2000, 2001, and 2002 were 23.95%, 21.88%, and 28.42%, respectively.

3.5.1 Scrap Metal

The recycling of scrap metal at NAVSTA Newport is done through NAVSTA Newport. All material determined to be unserviceable or scrap by the Property Disposal Office must be turned in to the scrap yard. All scrap metal is transported to the scrap metal yard located directly west of Building 47CC in Coddington Cove. Scrap metal accumulated in this location includes the following:

motor parts drums
doors (metal) fire extinguishers
old dumpsters
white goods (stoves, refrigerators, washing machines, etc.)

Under the QRP, this scrap metal is sold through the NAVSTA Newport Supply Department.

3.5.2 Aluminum Cans

Aluminum cans are either recycled through the Recycling Center (if a command participates in the voluntary program) or recycled by the solid waste contractor as part of the mixed recyclables collection. Commands participating in the aluminum can recycling program collect aluminum cans at their facilities and transport the cans to Building 47CC in plastic bags. Supply personnel at Building 47CC weigh the bags of aluminum cans and provide a receipt to the command. Supply personnel process and sell all aluminum cans and credit each command's holding account biannually for the amount they have turned in. The holding account containing aluminum can recycling monies may be used at each command's discretion.

3.5.3 Toner Cartridges

All toner cartridges are purchased and recycled through contract. The contractor delivers new cartridges to the work place and collects all used cartridges for recycling from the point of use.

3.6 Armed Forces Reserve Center, Providence, RI

The Armed Forces Reserve Center currently recycles white paper, wood, scrap metal and plastic materials. White paper and plastics are removed by the current solid waste contractor for this facility. Shredded white paper is bagged into plastic bags and stored in the main facility building. Scrap metal and wood debris is stored in a fenced area located in the southeast corner of the property. Shredded paper, scrap metal, and wood debris is brought to the DRMO recycling station at NAVSTA Newport.

3.7 Contractor Generated Solid Waste

Outside construction contractors performing work on NAVSTA Newport are required to dispose of construction debris after all recyclable materials have been segregated. Table 5 summarizes the total quantity of mixed trash disposed and recyclable materials diverted by contractors.

| TABLE 5 CONTRACTOR MIXED TRASH AND RECYCLABLE QUANTITIES (TONS) NAVSTA NEWPORT, RI | | | |
|---|---------------|-----------------|---------------|
| Material | Weight | Material | Weight |
| Other | 28.32 | Gypsum | 0.00 |
| Cardboard | 0.00 | Concrete | 766.00 |
| Brush, Grass, Leaves | 2.00 | Glass | 0.27 |
| Wood | 66.00 | Paper | 0.00 |
| Metal | 16.98 | Fiberglass | 0.74 |
| Plastics | 0.00 | Copper | 0.00 |
| Masonry | 800.00 | Asphalt | 14.36 |
| Mixed Trash: | | 153.67 | |
| Total Weight Recyclable Materials: | | 1694.67 | |

3.8 Evaluation of Goals

The current goal for diversion of NAVSTA Newport family housing and commercial operations is 35% and the Department of Defense MOM goal is 40% by the end of fiscal year 2005. Table 6 details the diversion rate for 2002 for both of these categories.

TABLE 6
DIVERSION RATES COMPARED TO GOALS
NAVSTA NEWPORT, RI

| Category | Recycling | Mixed Trash | Total SW | % Diversion | Goal % |
|--|-----------|-------------|----------|-------------|--------|
| Commercial & Family Housing | 1493.22 | 3760.23 | 5253.45 | 28.42 | 35 |
| Commercial, Family Housing, & Contractor Generated | 3187.89 | 3,913.90 | 7101.79 | 44.89 | 40 |

The data for 2002 indicates that while NAVSTA Newport is not meeting the goal of 35% diversion of commercial and family housing solid waste, the MOM goal is being exceeded due to the high percentage of materials being recycled through contractors performing work on NAVSTA Newport.

4.0 WASTE CHARACTERIZATION

4.1 Assessment of Proposed Solid Waste Disposal and Recycling Container Locations

Based on the *Nobis* dumpster survey performed in January 2003, it appears that for most of NAVSTA Newport, there were a sufficient number of solid waste dumpsters and recycling containers present. A number of dumpsters were observed to be empty during the survey; however, the survey was performed on a Friday, which was reported to be a day for solid waste pickups. During the survey, the solid waste contractor was observed emptying dumpsters in the Coddington Point section of NAVSTA Newport.

Nobis also assessed the proposed dumpster and recycling container locations set forth in "Section J" of the most recent solid waste removal contract solicitation. "Section J" includes a listing of the recyclable and disposable solid waste collection locations, the type of collection containers, and collection frequency, and is attached to this SWMP as an appendix to the DLP. The proposed number of dumpsters and recycle containers seem sufficient with the exception of the number of mixed paper recyclable containers at Building 116. Reportedly, the recyclable containers are picked up on Wednesday for NAVSTA Newport. During the survey observations, one container was full and a second was half-full at Building 116. An additional mixed paper recycling container should be placed at this location.

The present mixed trash and recyclable system at the Armed Forces Reserve Center in Providence, RI is not adequate. One 8 cy mixed trash dumpster is presently located at this facility. Recycling containers for paper and plastics are also located at the facility but do not appear to be properly used. Bagged mixed trash, bagged white paper, scrap metal, and wood were observed on the ground surface surrounding the existing dumpster.

The presence or absence of recyclable containers did not appear to correspond to the percentage of recyclable materials discovered within solid waste dumpsters during the survey. For example, even

when cardboard recyclable dumpsters were present beside a mixed trash dumpster, cardboard boxes were observed within the mixed trash dumpster. It should be noted that the January 2003 survey was a one-day event and may not be representative of weekly activity.

4.2 Population

Population at NAVSTA Newport is made up of three components:

- approximately 3,725 full-time residents (1,439 active duty plus family members);
- approximately 5,057 non-residents (civilian employees and active duty personnel); and
- approximately 1,907 transients (students).

4.2.1 Full-Time Residents

Full-time residents are active duty personnel assigned to service at NAVSTA Newport and their families who live in NAVSTA Newport housing. Family members residing in NAVSTA Newport housing are included in this category because they directly contribute to NAVSTA Newport solid waste quantities. NUWC military personnel living in NAVSTA Newport housing have also been included. Full time residents are listed in Table 5.

For the purpose of this Plan, the student population is included as full time residents. The number of students remains approximately the same throughout the year as a rotating population. There are three months out of the year (non-consecutive) which appear to have the greatest flux in population, however this is believed to have negligible effect on solid waste generation when viewed on an annual basis.

| TABLE 7 NAVSTA NEWPORT FULL-TIME RESIDENTS 2002 | | | | |
|---|----------------------|---------------|-----------------------------------|-------------------|
| Personnel | Housing Units | Active | Average Residents per unit | Population |
| Family Housing | | | | |
| Military Staff | 954 | 820 | 2.5 | 2,050 |
| Students | 476 | 410 | 2.5 | 1,025 |
| Bachelor Quarters | | | | |
| Combined Bachelor's Housing (CBH) | 650 | --- | --- | 650 |
| Total | | | | 3,725 |
| Notes: (1) Data obtained from Dave Sanders, NAVSTA Newport Public Affairs Office (2) Population figures were calculated by multiplying the active unit by the Average Residents per unit. Please refer to Appendix D for calculations. | | | | |

4.2.2 Non-Residents

The NAVSTA Newport non-resident population includes civilians and military personnel living off-base in private housing. Non-residents are listed in Table 6.

| TABLE 8 NAVSTA NEWPORT NON-RESIDENTS 2002 | |
|---|-------------------|
| Personnel | Population |
| NAVSTA Newport Off-Base Military | 851 |
| NAVSTA Newport Civilians | 4,206 |
| Total | 5,057 |
| Notes: (1) Data from Dave Sanders, Public Affairs Office. (2) Please refer to Appendix D for calculations. | |

Applying adjustments that represent contributions to total NAVSTA Newport solid waste generation, total equivalent full-time residents may be estimated as follows:

$$\begin{aligned}
 \text{Residents} \times 1.00 &= 3,725 \\
 \text{Non-residents} \times 0.10 &= 506 \\
 \text{Total equivalent residents} &= 4,231
 \end{aligned}$$

4.3 Generation Rates

NAVSTA Newport solid waste generation quantities are accounted for by the solid waste collection contractors and the NAVSTA Newport Recycling Center. Table 7 summarizes the tonnage of MSW generated by NAVSTA Newport in 2000, 2001, and 2002.

| TABLE 9 MUNICIPAL SOLID WASTE GENERATION (tons) NAVSTA NEWPORT, RI | | | |
|---|-------------|-------------|-------------|
| Type Of Generation | 2002 | 2001 | 2000 |
| Family Housing Quantity | 1383.01 | 1404.45 | 1280.66 |
| Base (Commercial) Quantity | 2377.22 | 2918.82 | 2723.14 |
| TOTAL MSW Generated | 3760.23 | 4323.27 | 4003.80 |
| Per Capita Generation Rate (lb/capita/day) | 4.87 | 5.60 | 5.19 |

According to the EPA "Waste Prevention, Recycling, and Composting Options: Lessons from 30 Communities", February 1994, the 1990 average per capita residential waste generation for a suburban township of comparable population as NAVSTA Newport was an average of 2.1 to 5.9 lb/capita/day. Based on the average generation for 2000, 2001, and 2002, the per capita generation is 5.22 lb/capita/day. Based on data for the three individual years, 2002 had the lowest per capita generation rate to date. These rates for NAVSTA Newport are comparable to published rates. Refer to Appendix D for calculations and assumptions.

5.0 FUTURE CONDITIONS AND AREAS FOR ADDITIONAL SOLID WASTE REDUCTION

5.1 Population Projections

The population of NAVSTA Newport in 2000, 2001, and 2002 has been relatively stable and is not expected to significantly change within the time frame of current and/or prospective solid waste contracts. However, if significant population changes do occur, careful planning will be necessary to manage the decreased or increased solid waste including storage, collection, recycling and disposal.

5.2 Generation Projections

Total solid waste generation is expected to remain between 4.9 and 5.5 lb/capita/day, or decrease slightly.

5.3 Recycling

5.3.1 Potential Additional Recycling

Based on historic solid waste generation and recycling data, overall recycling rates remained fairly stable until 2002, when a significant increase occurred, as shown in Table 8.

| TABLE 10 PERCENTAGE OF SOLID WASTE DIVERTED THROUGH RECYCLING NAVSTA NEWPORT, RI | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|
| Year: | 2002 | 2001 | 2000 | 1999 | 1998 |
| Total Percentage: | 28.42 | 21.88 | 23.95 | 22.30 | 22.25 |
| Housing Percentage: | 15.95 | 14.48 | 14.67 | 14.68 | 13.39 |
| Base (Commercial) Percentage | 34.11 | 25.01 | 27.65 | 25.44 | 26.58 |

In January 1999, NAVSTA Newport performed a survey of all trash dumpsters and roll-offs at NAVSTA Newport. The purpose of the survey was to evaluate the locations, the general condition and the character of the containers and waste at a more or less random point in time. This data indicated that cardboard and office paper had the largest percentage of unrecovered materials. The estimated unrecovered quantity of these two materials for 1999 were 273 tons and 560.1 tons, respectively.

The January 2003 dumpster survey also indicated that the materials with highest unrecovered percentages were cardboard and mixed paper. As shown in Table 8 above, recovery rates for total recyclables remained fairly consistent from 1998 through 2001, with a large increase in 2002. The January 2003 dumpster survey indicated that recyclable materials were still being disposed as solid waste, although at a lower percentage than the 1999 survey indicated. A further increase in recycling of cardboard and office paper would result in even larger diverted material percentages.

5.3.2 Employee Training

Employee training and awareness is a key factor in reducing the unrecovered recyclable materials percentage. Recycling Coordinators are trained by the NAVSTA Newport Environmental Protection Department. The Recycling Coordinators are responsible for training military personnel and civilians in their respective departments. Recycling pamphlets are distributed to both NAVSTA Newport employees and family housing residents. Family housing residents are provided with NAVSTA Newport recycling information in their welcome packet when they move into NAVSTAT Newport housing and NAVSTA Newport employees are given their pamphlets when they are trained by the recycling coordinators. Both of these pamphlets are also available through the Environmental Protection Department.

5.4 Source Reduction

Source reduction or up-front planning to reduce the amount of waste entering the solid waste stream is an essential element of solid waste management planning.

Office paper and cardboard continue to be the two largest components of the overall commercial recyclable waste stream at NAVSTA Newport and cardboard is the largest component of the residential recyclable waste stream. A third potential area of source reduction is in the food service operations including the Galley, the O-Club, the Recreation Center, the Exchange (deli) and the Hospital. There is currently no alternative to disposal as mixed trash for food waste associated with family housing.

5.4.1 Waste Paper Reduction

Waste paper reduction techniques are currently in use at NAVSTA Newport and include the methods listed in Table 9.

| TABLE 11 | |
|---|---|
| WASTE PAPER REDUCTION TECHNIQUES IN USE AT NAVSTAT NEWPORT | |
| 1. | Use of double-sided copiers; All NAVSTA Newport copiers are currently equipped with this capability. |
| 2. | Reuse of envelopes and use of two-way ("send-'n-return") envelopes. |
| 3. | Circulation lists are kept current to avoid duplication. |
| 4. | Note pads are constructed from waste paper. |
| 5. | Circulation (instead of a copy being sent to everyone) of memos, documents, periodicals, and reports. |
| 6. | Dissemination of announcements and memos via electronic mail, central bulletin boards, ect. |
| 7. | Documents are saved on hard drives and/or backed up on floppy disks instead of making paper copies. |
| 8. | Documents are reviewed and edited through the use of a computer instead of printing a hard copy of a document for review. |

The Navy Print Shop (DPSDO, Building 47CC) prints large quantity jobs for other NAVSTA Newport tenants as well as military installations outside the Newport area. DPSDO averages 30 million copies per year. Currently, the DPSDO Order Form contains the following statement: "We Strongly Urge Two Sided Printing When Possible." A stronger statement implying that two sided copying would be used whenever appropriate unless specifically requested otherwise would help to reduce the amount of resulting waste paper. This suggestion was made in the October 2000 SWMP for NAVSTA Newport and reportedly has not been implemented as of this time.

5.4.2 Waste Cardboard Reduction

NAVSTA Newport is already reusing and recycling significant amounts of cardboard. However, the recent dumpster survey and relatively stable percentage of diverted cardboard materials for NAVSTA Newport over the last five years indicates the potential for additional cardboard recycling. While it appears that there is a sufficient number of cardboard recycling containers present, the containers are not always being used appropriately and cardboard materials are still being placed in solid waste dumpsters over cardboard recycling containers even when the containers are placed side-by-side. Education and proper labeling of solid waste dumpsters and recycling containers would help to increase cardboard recycling percentages. Additionally, several methods for reducing waste cardboard volume are detailed below in Table 10.

| TABLE 12 | |
|--|--|
| WASTE CARDBOARD REDUCTION PRACTICES | |
| 1. | Order merchandise in bulk. |
| 2. | Purchase products with minimal packaging. |
| 3. | Work with suppliers to minimize the packaging used to protect their products. |
| 4. | Establish a system for returning cardboard boxes to suppliers for reuse. |
| 5. | Request that deliveries be shipped in returnable and/or recyclable containers. |

These practices were recommended in the October 2000 SWMP; however, they have reportedly not been implemented as of this time. Implementation of the practices listed in Table 10 would have to be accomplished through efforts of the NAVSTA Newport Supply Department and FISC (Fleet Industrial Supply Center) with encouragement from NAVSTA Newport Environmental personnel.

5.5 Waste Stream Tracking

The current solid waste contract for NAVSTA Newport provides sufficient data for solid waste tracking and planning. Weight slips for deliveries of both housing and NAVSTA Newport operations mixed solid waste and recyclable materials are furnish to the Environmental Protection Department where the data is tabulated into a report of monthly amounts for each category of material. This information has been incorporated into previous sections of this SWMP.

5.6 Education and Awareness

NAVSTA Newport currently has several avenues for dissemination of recycling information. These avenues are discussed below:

5.6.1 NAVALOG

The “NAVALOG” is the weekly naval newspaper serving the commands and activities of NAVSTA Newport, Rhode Island. The paper is available for Naval personnel and the community. Currently the paper is used to announce changes in recycling procedures or locations.

5.6.2 Naval Cable TV Channels

There are reportedly two cable television channels maintained for Naval news and information. One channel is exclusively a bulletin board channel that scrolls information. The other is a news channel with a format similar to a network news broadcast. A cable TV studio is maintained on base and is available for Naval personnel broadcast production. Information on changes or additions to the recycling program is broadcast from at least one of these stations. Any additional available usage of this media to provide education and awareness should be fully utilized.

5.6.3 Plan Of The Day

The “Plan Of The Day” is the daily NAVSTA Newport memo for military personnel. This publication is currently used for important announcements about changes to the recycling program.

5.6.4 Information Resources Management Department

Electronic communication (i.e., intranet, internet, e-mail) is currently being used whenever possible to provide notices regarding solid waste collection and recycling practices in addition to being a means of decreasing waste paper generation as discussed above.

5.7 Material Procurement

A good recycling program consists of both recovery of used material and procurement of recycled post consumer goods to ensure a market exists for recyclable materials.

Executive Order #12873 “Federal Acquisition, Recycling and Waste Prevention” and Executive Order #13101 “Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition” outlines requirements for recycled materials acquisition, recycling, and waste prevention where disposal should be the last resort.

The EPA has developed the CPG, which lists 50 recycled content items designated for procurement. The Recovered Material Advisory Notice (RMAN) provides recommendations for purchasing the products designated in the CPG. The most recent issue of the CPG and RMAN was issued in January 2000. The following is a list of categories and designated items.

- 1) Paper and paper products
 - Commercial/industrial sanitary tissue products
 - Miscellaneous papers
 - Newsprint
 - Paperboard and packaging products
 - Printing and writing papers

- 2) Vehicle Products
 - Engine coolants
 - Re-refined lubricating oils
 - Retread tires
- 3) Construction Products
 - Building insulation products
 - Carpet and carpet cushion
 - Cement and concrete containing coal fly ash and ground granulated blast furnace slag
 - Consolidated and reprocessed latex paint
 - Floor tiles
 - Flowable fill
 - Laminated paperboard
 - Patio blocks
 - Railroad grade crossing surfaces
 - Shower and restroom dividers and partitions
 - Structural fiberboard
- 4) Transportation Products
 - Channelizers
 - Delineators
 - Flexible delineators
 - Parking stops
 - Traffic barricades
 - Traffic cones
- 5) Park and Recreation Products
 - Park benches and picnic tables
 - Plastic fencing
 - Playground equipment
 - Playground surfaces
 - Running tracks
 -
- 6) Landscaping Products
 - Garden and soaker hoses
 - Hydraulic mulch
 - Lawn and garden edging
 - Compost made from yard trimmings or food waste
 - Plastic lumber landscaping timbers and posts

- 7) Non-Paper Office Products
 - Binders, clipboards, file folders, clip portfolios, and presentation folders
 - Office recycling containers
 - Office waste receptacles
 - Plastic desktop accessories
 - Plastic envelopes
 - Plastic trash bags
 - Printer ribbons
 - Toner cartridges

- 8) Miscellaneous Products
 - Awards and plaques
 - Industrial drums
 - Manual-grade strapping
 - Mats
 - Pallets
 - Signage
 - Sorbents

Some purchasing accounts for NAVSTA Newport are set up to ensure that CPG items are purchased.

6.0 RECOMMENDATIONS

The following sections include new recommendations as well as reiterating the importance of increased usage of existing practices.

6.1 Collection

Refer to the DLP (Appendix A) for proposed solid waste collection system recommendations for NAVSTA Newport. The current removal system for the Armed Forces Reserve Center in Providence, RI is not adequate. Large amounts of solid waste materials and recyclables are stored on the ground surface around the present dumpster location. An additional 8 cy dumpster should be placed at this facility to provide additional capacity for solid waste materials. The collection schedule for this dumpster should be coordinated with the schedule monthly training exercises at the facility because most of the materials generated from this facility occur during this weekend.

6.2 Recycling

- A. NAVSTA Newport's current recycling rate for commercial operations and family housing is approximately 28.42% of the total solid waste generated. This rate is within the national average of 25-35%, and above the state goal of 15%. However, it is below the NAVSTA Newport goal of 35%. NAVSTA Newport's current overall recycling rate, which includes both commercial operations and family housing solid waste and solid waste generated by contractors performing work on the base, is 44.89 %. This percentage is greater than the Department of Defense Measure of Merit goal of 40% (by fiscal year 2005). NAVSTA Newport should work to increase its overall recycling rate through either implementation of the various recommendations in this Plan or increased focus on existing techniques currently being used.
- B. The greatest quantity of potential recyclable materials at NAVSTA Newport comes from the paper and cardboard waste streams. NAVSTA Newport should ensure that the recycling contractor has cardboard and paper recycle containers at all locations listed in "Section J" of the solid waste solicitation for 2003. These locations should be monitored periodically by NAVSTA Newport personnel just prior to removal by the contractor to ensure that there are a sufficient number of containers present. The number of containers could then be either increased or decreased, as appropriate.
- C. All recycling containers should be clearly marked as such. The type of dumpster used for cardboard only should be of a different color than the dumpsters used for mixed trash. It would also be easier to differentiate mixed paper recycling containers from mixed recyclable recycling containers if they were different colors and consistently labeled.
- D. A cardboard recycling container and additional paper and mixed recyclable containers should be placed at the Armed Forces Reserve Center (Providence, RI) in locations that would encourage material recycling. Additionally, recycling containers should be placed within the building for shredded paper recycling. An additional mixed paper recycling container should be placed adjacent to Building 116.

6.3 Disposal

- A. All current and proposed disposal appears to be carried out in accordance with regulatory requirements. It is recommended that weight slips for all solid waste hauled off-site, including bulky construction waste, specify that the originated from NAVSTA Newport. The weight slips should also be signed by a representative of the disposal facility.
- B. NAVSTA Newport should also maintain documentation of disposal sites for all recyclables processed by the NAVSTA Newport Recycling Center and that the

weight slips also specify that the waste was generated at NAVSTA Newport and be signed by the accepting facility.

6.4 Source Reduction

The following recommendations are made with regard to source reduction efforts at NAVSTA Newport.

- A. Two-sided copies policy should be made whenever applicable. All copiers in use at NAVSTA Newport have the capacity for two-sided copying. This implicit policy should be instructed to new assignees to NAVSTA Newport.
- B. The DPSDO Order Form should be redesigned to indicate that unless otherwise directed, two sided-copying would be performed when appropriate to facilitate the U.S. government's policy of waste reduction.
- C. Electronic communication and dissemination of information should continue to occur whenever feasible to reduce the number of hard copies of memos and announcements.
- D. Goods should be procured which have minimal packaging, or packaging which can either be returned to the supplier or reused at NAVSTA Newport, as previously recommended.
- E. Currently, two food pulpers are in use at the Galley. Two additional pulpers are scheduled to be installed, one at the O'Club and another at the Galley. Installation of additional food pulpers at the Recreation Center and Noble Roman's Pizza should be considered. Alternatively, a method of collection and transportation of food waste from these facilities to existing food pulper locations for reduction should be instituted. Implementation of a family housing food waste collection and composting service would also cut down on the amount of mixed trash disposed.
- F. Personnel of NAVSTA Newport should be encouraged to share newspapers/magazines and to cancel subscriptions that may not be necessary.
- G. Suggested waste cardboard reduction practices listed in section 5.4.2 should be implemented, where feasible.

6.5 Waste Stream Tracking

The following recommendations are made with regard to solid waste stream tracking.

- A. All tonnage reporting requirements to the government by private contractors and base operations should be fully enforced. Pick up vehicles should be weighed prior to initiating collection and prior to departure from NAVSTA Newport at Building

1166CC to provide a means for assurance that weight slip data provided by the contractor is accurate.

- B. Existing and future contracts and base operations should be designed to require haulers to certify as to ultimate disposal sites.

6.6 Education and Awareness

- A. It is essential that the entire NAVSTA Newport population, full-time residents and civilian employees, be informed about the SWMP and the importance of their cooperation and involvement. Training programs should also include military, civilian, and contract personnel at the Armed Forces Reserve Center.
- B. An effective Education and Awareness program must be in place for all persons newly assigned to NAVSTA Newport. Currently, both military and civilian personnel are given an initial training. The training system should also include annual “refresher”.
- C. Housekeeping/cleaning contractors and anyone else who removes recyclables and mixed trash from the buildings to the dumpsters and recycling containers should have a training program presented to them by the contractor currently performing the contract. These employees are often the last “link” in the “recycling chain” as they are the persons removing separated materials from the building and placing them into the recycling containers. Therefore, their awareness of the recycling program it is of utmost importance to the program’s success. The training program for the contractor’s employees should be approved by the Recycling/Pollution Prevention Coordinator for content and compliance with the SWMP program. This training should be conducted upon hire and annually thereafter.
- D. A semi annual report should be prepared on recycling activities on the base and Naval housing and placed in the paper. Current level and potential goals should be noted. This recommendation was suggested in the October 2000 SWMP for NAVSTA Newport but has not been implemented as of this time.
- E. The NAVSTA Newport TV stations could be used to provide visual recycling education through a dramatization of property recycling procedures for both housing and commercial settings.

6.7 Material Procurement

- A. The items designated by EPA’s CPG should be procured and for items not listed on the CPG, comparable items containing recycled materials should be substituted for items not containing recycled material content whenever possible.
- B. Contracts should contain the statement that “Materials purchased comply with Section 6002 of the Resource Conservation and Recovery Act, which directs

government agencies to promote recycling by increasing their purchases of products containing recovered materials.”

7.0 REFERENCES

- 1) OPNAVINST 500.1B (current edition)
- 2) Solid Waste Disposal Act (SWDA) of 1965 as amended by RCRA
- 3) NAVFAC MO – 213, Solid Waste Management
- 4) NFESA 5.0-004 –Solid Waste Management Plan (SWMP) Guide
- 5) NFESC UA-2039-ENV, Qualified Recycling Program (QRP) Development Guide
- 6) NAVMED COMINST 6280.1, Infectious Waste Management Instructions for Naval Medical Treatment Facilities
- 7) Title 40 of the Code of Federal Regulations (CFR), Part 243, Guidelines for the Storage and Collection of Residential, Commercial, and Institutional Solid Waste
- 8) Title 40 of the Code of Federal Regulations (CFR), Part 244, Solid Waste Management Guidelines for Beverage Containers
- 9) Title 40 of the Code of Federal Regulations (CFR), Part 245, Promulgation Resource Recovery Facilities Guidelines
- 10) Title 40 of the Code of Federal Regulations (CFR), Part 246, Source Separation for Materials Recovery Guidelines
- 11) Title 40 of the Code of Federal Regulations (CFR), Part 247, Guidelines for Procurement of Products that Contain Recycled Material
- 12) Title 40 of the Code of Federal Regulations (CFR), Part 250, Guidelines for Federal Procurement of Paper and Paper Products Containing Recovered Materials
- 13) Title 40 of the Code of Federal Regulations (CFR), Part 252, Guidelines for Federal Procurement of Lubricating Oils, Containing Re-finishing Oils
- 14) Title 40 of the Code of Federal Regulations (CFR), Part 253, Guidelines for Federal Procurement of Retread Tires.
- 15) Title 40 of the Code of Federal Regulations (CFR), Part 259, Standards for Tracking and Management of Medical Wastes
- 16) *Waste Prevention, Recycling, and Composting Options: Lessons From 30 Communities*, U.S. EPA, EPA530-R-92-015, February 19947
- 17) Executive Order 13101, *Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition*.
- 18) RCRA Orientation Manual, Section 5, Chapter 1: Federal Procurement Requirements, U.S EPA, EPA 530-R-02-015, September 2002.
- 19) State Regulation 23-18.8-2, Recycle Quantity Targets
- 20) State Regulation 23-18.9-1(a)(1), Solid Waste Separation Guidelines
- 21) Codified Ordinances of the City of Newport, RI, Chapter 1063, Solid Waste Management
- 22) *Rules and Regulations for Reduction and Recycling of Commercial and Non-Municipal Residential Solid Waste*,
- 23) *Municipal Solid Waste Collection and Recycling*; City of Newport Codified Ordinance 8.24.050.
- 24) Commanding Officer/Executive Officer Listing, Newport Area Command, November 8, 2002.
- 25) Executive Order 12873, *Federal Acquisition, Recycling, and Waste Prevention*.